CLAIMS

1. An antenna diversity receiver comprising in-phase and quadrature channels, means for connection to first and second antennas, switching means having a first state in which signals from the first antenna are routed to the in-phase channel and signals from the second antenna are routed to the quadrature channel, a second state in which signals from the first antenna are routed to both in-phase and quadrature channels, and a third state in which signals from the second antenna are routed to both in-phase and quadrature channels, signal quality comparison means for determining the relative qualities of the received signals in the in-phase and quadrature channels when the switching means is in its first state, and diversity control means for controlling the state of the switching means depending on the relative signal qualities determined by the signal quality comparison means.

2. A receiver as claimed in claim 1, characterised in that the receiver is a zero-IF receiver.

3. A receiver as claimed in claim 1 or 2, characterised in that the signal quality comparison means includes means for determining a received signal strength indication for each signal.

4. A receiver as claimed in claim 1 or 2, characterised in that first and second amplifying means are provided for amplifying signals from a respective one of the first and second antennas, and in that the diversity control means includes means for switching off the amplifying means corresponding to the unused antenna when the switching means is in its second or third state.

5. An antenna diversity receiver implemented an integrated circuit, comprising in-phase and quadrature channels, means for connection to first and second antennas, switching means having a first state in which signals

from the first antenna are routed to the in-phase channel and signals from the second antenna are routed to the quadrature channel, a second state in which signals from the first antenna are routed to both in-phase and quadrature channels, and a third state in which signals from the second antenna are routed to both in-phase and quadrature channels, signal quality comparison means for determining the relative qualities of the received signals in the in-phase and quadrature channels when the switching means is in its first state, and diversity control means for controlling the state of the switching means depending on the relative signal qualities determined by the signal quality comparison means.

6.   A receiver as claimed in claim 5, characterised in that the signal quality comparison means includes means for determining a received signal strength indication for each signal.

7.   A receiver as claimed in claim 5 or 6, characterised in that first and second amplifying means are provided for amplifying signals from a respective one of the first and second antennas, and in that the diversity control means includes means for switching off the amplifying means corresponding to the unused antenna when the switching means is in its second or third state.